



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1460  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/688,273

10/17/2003

Kimmo Mylly

915-005.074

3787

4955

7590

01/25/2006

WARE FRESSOLA VAN DER SLUYS &  
ADOLPHSON, LLP  
BRADFORD GREEN BUILDING 5  
755 MAIN STREET, P O BOX 224  
MONROE, CT 06468

EXAMINER

LEE, CHUN KUAN

ART UNIT

PAPER NUMBER

2181

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/688,273

Applicant(s)

MYLLY ET AL.

Examiner

Chun-Kuan (Mike) Lee

Art Unit

2181

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19,32,34,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) 20-31,33 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19,32,34,36 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 20021867.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/25/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 10/29/2005 have been fully considered but they are not persuasive.
2. Amendment to the drawing is acknowledged and entered and 35 U.S.C. 112 second paragraph rejection regarding claims 11 and 17-19 are withdrawn.
3. In respond to applicant's argument regarding the 35 U.S.C. § 102(a) rejection of claims 1, 5, 6, 7, 12, 13 and 14 that Lindskog et al. (US Pub.: 2002/0132603) teaches nothing whatsoever said about any kind of signal, much less an interrupt signal from the card to the PC after receiving a wakeup command, thus is silent on the communication between the PC and the NIC to accomplish the task of waking up and furthermore, the passages pointed to by the examiner at page 6 of the Lindskog reference do not meet the claim limitation, as stated on pages 11-12. The argument has been fully considered but is not found to be persuasive because of the following reasons:

In claim 17, on page 6, lines 20-36, Lindskog teaches the "...mobile terminal (PC) request transition to active state, upon which request the NIC requests the access point (AP) to be entered into WLAN active state, and in which the mobile terminal enter the WLAN active state on acknowledgement from the access point", wherein said acknowledgement from the AP must be transfer to the NIC to be transferred to the mobile terminal and furthermore, since it would require the CPU or the like within the

mobile terminal to process said acknowledgement in order for the mobile terminal to enter the WLAN active state, NIC must issue an interrupt signal regarding said acknowledgement, wherein receiving and processing of the interrupt signal request by the CPU is well known to one skilled in the art.

4. In respond to applicant's argument regarding the 35 U.S.C. § 103(a) rejection of claims 2, 8 and 15 that the teaching of Wiegel (US Patent 6,131,163) can not be applied because the publication does not relate to changing modes. The argument has been fully considered but is not found to be persuasive for the following reasons. Examiner is relying on Wiegel's teaching regarding the interrupt line coupling the NIC to the processor rather than the changing of the modes. As signal lines must exist, coupling the NIC and the processor, in order for data or the like to be transfer between the NIC and the processor, Wiegel discloses that one of the signal line is an interrupt signal line, utilized for transferring interrupt requests.

5. In respond to applicant's argument regarding the 35 U.S.C. § 103(a) rejection of claims 3 and 9 that the teaching of Robinson et al. (US Patent 5,303,352) does not have anything to do with setting or transferring an interrupt request with respect to logical states thereof in regarding to a normal mode. The argument has been fully considered but is not found to be persuasive for the following reasons. As the normal mode is define as when the NIC is active and obviously desired to transfer data or the like and Robinson teaches that after transferring a request signal (interrupt request) by the NIC,

Art Unit: 2181

the logical state of the signal line is changed by transferring the control of the signal line to the master card (NIC) for data transferring, wherein the interrupt request is utilized in relation to the activation of the NIC to normal mode and the desire to gain control of the signal line for data transferring. More specifically, having a first logical state wherein the NIC is in dormant mode and do not have control of the bus for transferring data, then shifted to the second logical state wherein the NIC goes into normal mode and gain control of the bus for data transferring.

6. In respond to applicant's argument regarding the 35 U.S.C. § 103(a) rejection of claims 4, 10 and 16 that the teaching of Kihara et al. (US Patent 6,212,097) is used for a completely different purpose than the present applicants' application. The argument has been fully considered but is not found to be persuasive for the following reasons. Examiner is relaying on Kihara's teaching for the ability to use a signal lines both as a data line and an interrupt request line, thus enabling the reduction of the number of signal lines needed for transferring different types of signals, rather than the specific purpose of the present applicants' application.

#### ***Election/Restrictions***

7. Newly submitted claim 20-31, 33 and 35 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species of the claimed invention:

Specie I: Claims 2-6, 8-12, 14-15 and 18 are directed to peripheral configuration, wherein the peripheral is configured to the normal mode from the dormant mode.

Specie II: Claims 20-31, 33 and 35 are directed to peripheral monitoring, wherein the peripheral is being monitored for defect or in need of booting.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 7, 13, 16, 17, 19, 32, 34, 36 and 37 are generic because they are directed to configuration of peripheral, configuring the peripheral from dormant mode to active mode.

Upon the allowance of the generic claims, applicant will be entitled to consideration of Species II which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-31, 33 and 35, belonging to Species II are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It appears to be unclear as to how the terminal is “transmitting an interrupt request, relating to the mode change and generated by the card” while it appears that said terminal should be receiving said request. The reason for rejection is same as the 35 U.S.C. 112 second paragraph rejection for claim 17 in the previous office action, in view of the amendment stated in the applicants’ remark regarding changing “transmitting” to “receiving” for claim 17, examiner will assume that “transmitting” should be “receiving” for the current examination.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 5, 6, 7, 12, 13, 16-17, 19, 32 and 36 are rejected under 35

U.S.C. 102(a) as being anticipated by Lindskog et al. (US Publish Number: US 2002/0132603).

9. As per claims 1, 6 and 7 Lindskog teaches a system and method for changing a mode of a card connected to an interface of a (wireless) terminal, which card comprises

at least one dormant mode and a normal mode, in which the system and method a command for setting the normal mode is transmitted to the card to change the mode of the card from said at least one dormant mode to the normal mode, the card inherently generates an interrupt request related to the change in the mode of the card, to be transmitted via the interface to the terminal at the stage when the card shifts to the normal mode, wherein the interrupt request, received from the card and relating to the mode change, is processed in the (wireless) terminal ([0003]-[0004] and page 6).

10. As per claims 5 and 12, Lindskog teaches a system and method for changing a mode of the card connected to an interface of the terminal, which card comprises at least one dormant mode and the normal mode, in which the system and method the command for setting the normal mode is transmitted to the card to change the mode of the card from said at least one dormant mode to the normal mode, wherein after receiving said command to set the normal mode, an acknowledgement about the reception of the command is inherently transmitted from the card to the terminal ([0003]-[0004] and page 6).

11. As per claims 13 and 16, Lindskog teaches a (memory) card which is arranged to be connected to an interface of a terminal and which card comprises at least one dormant mode and a normal mode and means for processing a command to set the normal mode, said command coming via the interface of the terminal, for changing the mode of the card from said at least one dormant mode to the normal mode, and means



Art Unit: 2181

for generating an interrupt request inherently relating to the change in the mode of the card ([0003]-[0004] and page 6).

12. As per claims 17 and 19, Lindskog teaches a terminal (PC or mobile terminal, [0003]) provided with an interface for connecting a card (NIC, [0004]) to the terminal, which card comprise at least one dormant mode (D1, D2 and D3 or WLAN sleep state, [0028] and [0038]) and a normal mode (D0 or WLAN active state, [0028] and [0038]), and which terminal comprises an interface for transferring a command (order, [0057]) to set the card in the normal mode, for changing the mode of the card from said at least one dormant mode to the normal mode, wherein the terminal comprises means for receiving an interrupt request (acknowledgement, claim 17), relating to the mode change and generated by the card, via the interface from the card to the terminal, and that the terminal inherently comprises an interrupt processor for processing the interrupt request coming from the card and relating to the mode change (Fig.2; [0003]-[0004]; [0056]-[0067] and claim 17 on page 6).

13. As per claim 32, Lindskog teaches mode shifting method for a mobile terminal having a card interface for interfacing a card thereto for use after a command has been sent from terminal to the card to return from a dormant mode to a normal mode, comprising the terminal inherently receiving a signal from the card informing the terminal directly in response to said command that the card has shifted to the normal mode, and the terminal starting to use the card in a normal way in response to said card

Art Unit: 2181

informing the terminal that the card has shifted to the normal mode (Fig.2; [0003]-[0004]; [0056]-[0067] and claim 17 on page 6).

14. As per claim 36, Lindskog teaches method for use by a card interfacing to a mobile terminal via a card interface in said terminal, comprising receiving a command from said terminal to shift from a dormant mode to a normal mode, and after shifting from said dormant mode to said normal mode, inherently sending a signal to the terminal indicative of said card shifting from said dormant mode to said normal mode (Fig.2; [0003]-[0004]; [0056]-[0067] and claim 17 on page 6).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in view of Wiegel (US Patent 6,131,163).

Lindskog teaches the system and method for changing the mode of the card connected to the interface of the terminal, which card comprises at least one dormant mode and one normal mode, in which the system and method the command for setting the normal mode is transmitted to the card to change the mode of the card from said at

least one dormant mode to the normal mode, the card generates the interrupt request related to the change in the mode of the card, to be transmitted via the interface to the terminal at the stage when the card shifts to the normal mode, wherein the interrupt request, received from the card and relating to the mode change, is processed in the terminal; and wherein the card comprises obviously the bus connection block in order to properly transfer said interrupt request to the terminal (page 1, [0003] and [0004] and page 6).

Lindskog does not teach expressly such system and method for a wired network.

Wiegel teaches a wired network that includes an interrupt request as a signal on “an interrupt line coupled from the NIC to an interrupt controller to the processor”, with the processor, which is part of a computer based system (column 7, lines 39-54).

It would have been obvious to one of ordinary skill in this art, at the time of invention by applicant to invent a method for changing a mode of a card connected to an interface of a terminal such as one by Lindskog to be used for a wired network as suggested by Wiegel. Since wireless network is a technological evolution based on wired network. It would have been obvious to one of ordinary skill in this art, at the time of invention by applicant to incorporate newer functions of wireless networking into an older technology of wired networking.

16. Claims 3, 9, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in combination

with Wiegel (US Patent 6,131,163) further in view of Robinson et al. (US Patent 5,303,352).

Lindskog in combination with Wiegel are relied upon as discussed in the previous rejection.

Lindskog in combination with Wiegel does not expressly teach a signal line can have more than one state and said state changes after the card receives and implement a command send by the terminal; and an interface component at the terminal for receiving signal from the card; one data line for transfer of data between the terminal and the card; one command line for the transmission of command from the terminal to the card and for the transmission of the responses from the card to the terminal; and one clock line for the transmission of a clock signal from the terminal to the card.

Robinson teaches a bus between the bus master card and the control circuit, which is part of a terminal, has more than one state and said state changes when the bus master card receives and implement a signal send by the terminal (column 2, lines 63-65 and column 5, lines 18-31); an interface component (controller circuit 14 of Fig. 1) for receiving signal from the card; one data line (Fig. 1 ref 27); a command line (Fig. 1 ref 58-57); and one clock line (timing 29 of Fig. 1).

It would have been obvious to one of ordinary skill in this art, at the time the invention was made to implement Robinson's multi-state signal lines, interface component, data line, command line and clock line into Lindskog in combination with Wiegel's interconnecting system and method. Doing so further add and expand

Art Unit: 2181

Lindskog in combination with Wiegel's interconnecting system and method to enable the NIC to properly gain control of the bus for data transferring.

17. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in combination with Wiegel (US Patent 6,131,163) further in view of Kihara et al. (US Patent 6,212,097).

Lindskog in combination with Wiegel are relied upon as discussed in the previous rejection.

Lindskog in combination with Wiegel fail to teach wherein at least one of said signal lines is a data line, and that said interrupt request is transmitted on said data line.

Kihara teaches a system and method comprising a pluralities of signal lines connected to the card, wherein one of said signal lines is a data line and that both interrupt request and data can be send over said data line (Fig. 3; col. 7, ll. 55-67 and col. 8, ll. 1-10).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to implement the serial communication data line connecting to Kihara's (nonvolatile memory) card that can send both interrupt request and data over said serial communication data line into Lindskog in combination with Wiegel's interconnecting system and method. Doing so obviously increase the capability of a signal line, thus reducing the number of signal lines needed for a plurality of different signals send between the card and the terminal, for example, other than sending

Art Unit: 2181

interrupt request and data, said serial communication data line can also include command signals (Kihara, column 8, lines 2-3).

18. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in view of Kihara et al. (US Patent 6,212,097).

Lindskog teaches all the limitations of claim 17 as discussed above.

Lindskog does not expressly teaches wherein the interface is provided with one or more signal lines, that at least one of said signal lines is a data line, and that said interrupt request is arranged to be transferred on said data line, wherein the terminal comprises a coupling block for transferring the interrupt request from said data line to said interrupt processor.

Kihara teaches a system and method comprising a pluralities of signal lines connected to the card, wherein one of said signal lines is a data line and that both interrupt request and data can be send over said data line (Fig. 3; col. 7, ll. 55-67 and col. 8, ll. 1-10).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to implement the serial communication data line connecting to Kihara's card that can send both interrupt request and data over said serial communication data line into Lindskog's interconnecting system and method. Doing so obviously increase the capability of a signal line, thus reducing the number of signal lines needed for a plurality of different signals send between the card and the terminal,

Art Unit: 2181

for example, other than sending interrupt request and data, said serial communication data line can also include command signals (Kihara, column 8, lines 2-3).

19. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in view of Robinson et al. (US Patent 5,303,352).

Lindskog teaches mobile terminal having a card interface for interfacing a card thereto comprising receiving a signal from the card after a command has been sent from the mobile terminal to the card to return from a dormant mode to a normal mode indicative of the card shifting to the normal mode; and starting to use the card via said interface in a normal way obviously in response to said card informing the terminal that the card has shifted to the normal mode (Fig.2; [0003]-[0004]; [0056]-[0067] and claim 17 on page 6).

Lindskog does not expressly teach an interface and a processor.

Robinson teaches a computer system and method comprising of an interface (control circuit 14 of Fig. 1) for receiving a signal from the card and a processor (CPU 11 in Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Robinson's interface and processor into Lindskog's mobile terminal, because it is well known to one skill in the art that the computer system would comprise of a processor or the like for processing data and an

interface or the like to be coupled to the plurality of cards and receive data signal for the cards.

20. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Patent Publication 2002/0132603) in view of Wiegel (US Patent 6,131,163).

Lindskog teaches a card for interfacing to a mobile terminal via a card interface in said terminal, comprising a control device obviously, responsive to a command received over a connection from said terminal to shift from a dormant mode to a normal mode, interpreting said command as a command to shift to said normal mode from said dormant mode, for setting said card to said normal mode and for sending an interrupt inherently via said connection to said terminal indicative of said shift (Fig.2; [0003]-[0004]; [0056]-[0067] and claim 17 on page 6).

Lindskog does not expressly teach a buffer for storing commands received at the terminal.

Wiegel teaches a computer system and method comprising a buffer within the NIC, wherein the buffer is utilized for storing data or the like to be retrieved and processed later (col. 7, l. 39 to col. 8, l. 3).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Wiegel's buffer into Lindskog's NIC. Doing so would further add and expand Lindskog's NIC, such as buffering data or the like to be



Art Unit: 2181

retrieved and processed at a later time (col. 7, l. 39 to col. 8, l. 3). Furthermore, it is well known to one skilled in the art the use of buffer for flow regulation to be used in a NIC.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571)272-0671. The examiner can normally be reached on 8AM to 5PM.

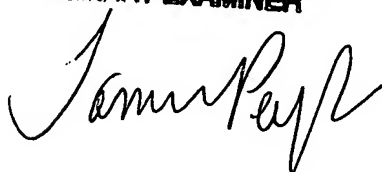
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571)272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2181

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.K.L.  
01/19/2006

**TAMMARA PEYTON**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read "Tamara Peyton", written in a cursive style.